



New Business Opportunities in the Field of Online Cooperation

A Master Thesis submitted for the degree of
“Master of Business Administration”

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Affidavit

I, **MICHAEL WEINZETTL**, hereby declare

1. that I am the sole author of the present Master's Thesis, "NEW BUSINESS OPPORTUNITIES IN THE FIELD OF ONLINE COOPERATION", 61 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

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Abstract

This thesis analyses the ground laying concepts of social networks, crowd sourcing, commons based peer production, open source projects and freelancer marketplaces. Subsequently a combination of these concepts is formed and a new product idea is elaborated building on these findings.

One billion people are already online, open innovation approaches spread and social networking services see continuous growth. Open source self-organized projects are currently mostly found in IT areas, but theories exist that this open source mindset will spread to other areas. Collaboration across continents is already usual for companies working with offshore contributors. These developments are picked up and used as a starting point for the analysis.

In a first step theoretical concepts from available research are analyzed and a map of where these concepts fit in and how their real world implementations fit together is drawn. In a second step a classification is developed which looks at certain commonalities and differences of real-world crowd sourcing solutions, freelancer marketplaces and open source projects. The classification is mainly based on qualitative factors and internet research. Freelancer marketplaces and crowd sourcing solutions are analyzed in more detail. The conclusion is that depending on the point of view and the decisive classification factors different groups of concepts belong together.

In a third step a brief opportunity analysis is developed. Potential product features are formulated and a strategic positioning is defined.

The outcome is very promising. On one hand starting points for further research are suggested, on the other hand concrete potential product features are defined.

However, this topic is on the forefront of innovative internet topics and is thereby still in a fluid phase, which means a lot of features and combinations need to be tried out and can not solely be deducted from research. Still the ground laying concepts of research do provide a basis for new product concepts which are currently not found in any competitive offers. The authors' take on the topic is that within the next years a lot of new concepts in this area will emerge.

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Introduction

Problem formulation

Since late 2005 a new topic emerged and is reflected in terms like: Common based peer production (coined by Benkler), crowd sourcing (coined by Wired Magazine) and Wikinomics (coined by Tapscott).

The question arises: What to do with the knowledge about this concept exactly? It sounds interesting and idealistic to think of a world where the individuals collaborate openly across countries and continents. By doing so they are building new sources of income. A world where they are able to realize projects building on resources they would not have in their own business and personal networks.

What opportunities arise based on the concept of common based peer production and Wikinomics beyond content based concepts like Wikipedia?

Are there ways to combine social networking success factors with this idea in order to create a new market place for freelancers, professionals and amateurs in general?

Does it minimize coordination costs?

Does it allow building of virtual ad hoc companies for the duration of a project?

What would it take to start such a collaboration market place (integration into business networks, positioning and business model)? Who would be the users, customers?

The special focus of this thesis is the opportunity analysis for a potential startup which would try to combine social business networking elements (like in Xing) with a resource market of actual available resources of people and projects.

With this solution it should be possible to build virtual companies for the duration of a project. It should be possible to have access to all kinds of resources needed to work on most of the projects.

The target groups for the solution are existing organizations seeking outsourcing, crowd sourcing and better integration of offshore partners.

Additionally it is interesting for independent people outside of an organization who are organizing themselves in professional projects.

Concrete steps in the analysis are the classification of already available collaboration offerings and where this new concept fits in. It is the analysis of success elements of social business networking offerings and which of these factors can be used for this new concept. It is furthermore based on the search for theoretical material in the common based peer production field and important points of literature about this topic.

The research was done using the internet – both for articles as well as real world business platforms, literature and scientific papers.

The outcome of the analysis should be on one hand a new way to look at the commonalities of the various solutions in the field of social networks, freelancing marketplaces, crowd sourcing and open source projects, as well as the analysis of the attractiveness of this concept for a potential startup project.

Vision

The vision to approach the general question of the thesis is to find a way to create a new kind of collaboration and project match making online platform that combines and extends existing concepts into one new and unique offering.

In the first part of the thesis I will analyze some theoretical ground laying concepts of Web 2.0 (this term is worn off but it still has no better substitution) in general, social networking and peer production in detail. Briefly topics of collaboration and transaction costs are touched.

The second part classifies the various concepts and the third part focuses on an opportunity analysis, the current market, potential customers and potential competitors. Then I identify concrete product features, marketing activities and realization options.

The idea is based on the insight and vision that the internet is more than just a way of passively consuming media content, shopping, news and googling for missing knowledge. It is also an immense opportunity to connect already more than one billion people on this planet.

All these people have talents and skills, interests and potential projects. Imagine a platform where somebody looking for work can join teams of other people to participate in the realization of commercial or private projects. He can have a day job and still work on side projects via this platform. Imagine a platform where ideas spread and people form teams around these ideas, people spread over the whole world who don't know each other in person and still trust each other to work together on a project.

It is idealistic and in its first embodiment might be simpler than it should be. It might be too early for a role out or oversimplified by its critics. I do believe that there are still a lot of internet developments in this field ahead of us and that new ways of working over the internet will establish over time.

User generated content: The trend of the pro-active internet user started a few years ago when terms like 'democratizing production' or 'the long tail' emerged. These were the forerunners of the paradigm shift we are facing today. First the focus was on user generated content. The internet and the open source communities offered enough tools to empower the consumers to generate their own content. It was also combined with the emergence of cell phones and digital cameras. A whole new game was breaking loose.

In parallel open source projects started to emerge and partly they were also providing ground laying tools for the development of the internet itself.

Social networks established since about the year 2002 as successors of online communities.

Mass customization: The next level in the paradigm shift is mass customization, where big companies started to adapt the user generated content concept so that their customers can – within certain boundaries – selected from customization options.

The consumers design their products. This way the company orchestrating such an effort has a shortcut route to the knowledge about what the consumer wants by collecting the feedback and monitoring the customization activities.

Mass collaboration: we are currently in the beginning of this phase. Crowd sourcing and open innovation is taking shape in various areas.

Still it seems there are currently three ‘new’ approaches around:

- big enterprise “letting go of control” and open up to let open innovation in
- big enterprise enabling the customer to design his product, e.g. crowd sourcing
- the open source projects approach where everything is shared and is governed by well defined licensing rules to guarantee the sustained existence of free software.

What is missing at the moment is the combination of the latest trends into a new form of concept:

- working towards a goal, be it for-profit, non-profit, private or academic
- building a team but still working in the fashion of an open source project
- all that with strong or weak ties individuals from the existing network or people just met via a collaboration network
- forming a temporary virtual organization like a sub network or cluster

My theory is that the emergence of social collaboration networks will be a new trend in the years to come.

Certain social networking standards have been established over the last eight years which represent certain best practices. There are countless social networking sites focusing on private individuals, youngsters or special interest groups. There not that many business social networking sites in the western hemisphere, some of the well known ones are XING, LinkedIn and Plaxo.

And there is the emerging phenomenon of crowd sourcing web sites.

Then there are freelancer sites, mostly IT or internet project focused. In the German speaking market there is no established leader in this market yet. In the US there are three market leaders (which started around 2002): elance.com, rentacoder.com and guru.com.

There are even Indian dollar millionaires which profited from these marketplaces asymmetrically by renting out cheap developers for high margin (relatively) hourly payment conditions.

Then there are craftsman and services related freelancer project sites. In the German market this is for example myhammer.de in the US it is domystuff.com.

These project related websites have the same principle in common. There are two kinds of stakeholders: Project owners looking for contractors and contractors looking for projects. Ebay like auctions for project acquisition are an optional feature.

This thesis is not about how to use wikis and blogs and other ‘social networking’ tools in big companies to nurture collaboration. It is also not about collaboration project management tools.

Currently there is no offering connecting those to kind of platforms together – social business networking and project markets. And there is also no solution adding collaboration to these solutions. The combination of those elements would be the topic of this thesis.

PART I – Theory and analysis of concepts

In this part of the thesis I want to shed light briefly on the ground laying theoretical concepts and terminology of social networking solutions, crowd-sourcing, open innovation and common-based peer production.

These elements will be the building blocks of the classification and the product idea which is described in a practical and business oriented approach in part three of the thesis.

Social network analysis

The Social Network Analyses combines the following activities [RK07]:

- Aggregation of data (e.g. analysis of email traffic in order to describe nodes and their communication relationships)
- Definition of quantitative methods to describe the network
- Analysis and visualization of patterns.

The major finding is that networks tend to be ‘scale free’ meaning they are not distributed evenly but instead there are a few hubs which have extremely high numbers of connections to other nodes. The consequence is that the probability that a node is connected to another node grows exponentially with the number of already existing connections of the other node. These hubs also serve as explanation for below mentioned small world phenomenon. Around these hubs the formation of clusters can be observed.

In summary there are a small number of high connection hubs and a majority of nodes with a small number of connections. For intra or inter enterprise SNS for example the awareness of these hubs can help to optimize the communication flows and to change certain processes.

Weak ties

Three ground laying concepts for this discussion are the “Small World Phenomenon” by Milgram, “The Strength of Weak Ties” by Granovetter [GM73] and the “Theory of Embeddedness” by Granovetter [GM85].

The small world phenomenon describes the surprising finding that the average path length (the average degree of separation between two arbitrary individuals in a human social network) is very low, e.g. 6 or lower. Milgram conducted various experiments in the US to prove that assertion and is therefore awarded with coining the term. The idealized visualization of that idea is shown in Figure 1.

SNS use this insight to generate trust among users who actually don't know each other directly by just showing them their connection path within the social system. Since this principle always works there is always some sort of connection path no matter if the counter party is trustworthy or not.

The second major factor is the concept of weak ties.

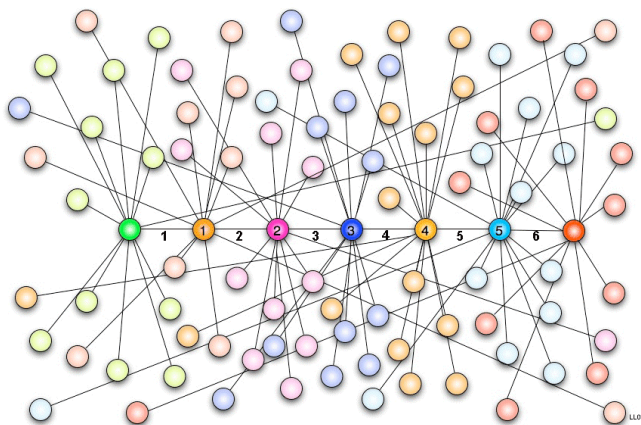


Figure 1: 6 degrees of separation, Source: Wikipedia Commons

Granovetter's theory is based on the assertion *that our acquaintances (weak ties) are less likely to be socially involved with one another than our close friends (strong ties). A individual thus has a closely-knit network of friends and a low-density network of acquaintances. Most of the friends are in touch with one another and form a densely knit cluster of social structure. Most of the acquaintances won't know each other but are themselves part of different densely knit clusters of social structure.*

The weak ties become not just acquaintances but important bridges between those clusters. The clusters would not be connected otherwise. As a consequence of that individuals with few weak ties do not get information from distinct parts of the social

system and are confined to provincial news of their close friends. They are deprived from latest ideas and fashion, as well as disadvantages in the labor market. A social system lacking weak ties is fragmented and incoherent. Ideas spread slowly and scientific endeavors are handicapped, subgroups have a hard time to get going.

A different point of view to the weak ties theory is described in [BU03], namely that people living on the intersection of social worlds are more likely to have good ideas than people within one social world where thinking is more homogenous. People familiar with different ways of thinking placed between segregated worlds and thus are more likely to synthesize alternative approaches.

SNS like Xing visualize these kinds of separation paths. Often the path length is rather 3 or 4. In this sense Xing is a permanent prove of the small world concept.

The third major point is the theory of embeddedness. In [GM85] Granovetter elaborates on “Economic Action and Social Structure: The Problem of Embeddedness”. He shows that *"the on-going networks of social relations between people discourage malfeasance."* People guide their choices based on past actions with people and continue to deal with those they trust. He deduces that idealized economic models which see social structures just to keep order but not as influencing factor of economic behavior have to be combined with social structure models. Though the embeddedness theory makes no assumptions of an orderly self-regulating system and acknowledges that social networks alone will not prevent malfeasance.

Functions of social networking services

The common functions of social networking services (SNS – instead of ‘services’ also ‘software’ or ‘sites’ can be meant depending on the context) are analyzed (see [RK08]) in the following section. Currently there still seems to be a large gap between available research and real-world usage, which faces enormous growth at the moment. Though there is ground laying social networking analysis going back to the 1930s.

Apart from the referred to article an interesting website collecting links to SNS research articles is worth mentioning: [DA09].

The above-mentioned article attempts to categorize SNS by looking at open and closed SNS. Among the open SNS there are business oriented SNS (XING – business, German, LinkedIn – business, US), private / fun oriented (Facebook) and private / student oriented StudViz (German) for example.

As a side note a discussion about public / private can be mentioned [BO07]. The outcome of this discussion is that *social network sites are the latest generation of 'mediated publics' - environments where people can gather publicly through mediating technology and mediated publics have four properties that are unique to them:*

- *Persistence. ('...what you say sticks around')*
- *Searchability*
- *Replicability*
- *Invisible audiences*

The result of another SNS [RK08] analysis is that six basic functionalities can be identified as:

- *Identity management*
- *Expert finding*
- *Context awareness*
- *Contact management*
- *Network awareness*
- *Exchange*

A similar definition can be found in [BOEL07], which breaks it down to three major functionalities that define a SNS offering:

Web-based services that allow individuals to:

- construct a public or semi-public profile within a bounded system
- articulate a list of other users with whom they share a connection
- view and traverse their list of connections and those made by others within the system

According to this article *the rise of SNSs indicates a shift in the organization of online communities. While websites dedicated to communities of interest still exist and prosper, SNSs are primarily organized around people, not interests. Early public online communities such as Usenet and public discussion forums were structured by topics or*

according to topical hierarchies, but social network sites are structured as personal (or "egocentric") networks, with the individual at the center of their own community.

This is a very simple and yet compelling insight. Further the article also shows an overview graphic of the launch dates of major SNS to illustrate how young this topic actually is:

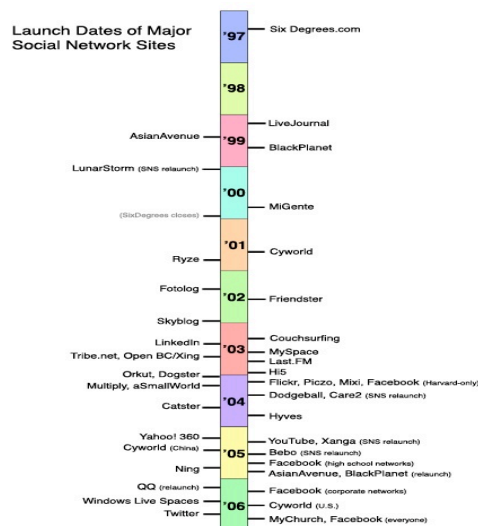


Figure 2: Launch dates of major SNS, Copyright [BOEL07]

Identity management

According to [RK08] *identity management can be seen as a possibility to present oneself, mainly in the form of a user profile to the public or at least larger audience. The user can control what kind of data he gives away and how it is presented. The user wants to present himself in an optimal way to his target audience.* This is one of the main functionalities of SNS and one of the biggest motif forces for a user to log in to a SNS in a recurring way.

Behind this motivation is the motivation to use a specific SNS in the first place. Either it is to connect to a friend network or to keep up to date with the business network.

There are differences regarding privacy in the way business SNS profiles are implemented between Europe vs. the US. E.g. Xing, the leading German business SNS is offering a possibility to show a photo on the profile. The US business SNS LinkedIn has no photo option which is in synch with the US policy of doing applications without photos and age information. Access rights can be direct or role based (access for all users in personal network). This form of self presentation satisfies several human needs.

In StudViz there are examples for further ways to present oneself. E.g. certain group memberships can emphasize the personal point of view or the attitude, guest books can be used for consciously open (to anybody) discussions with friends.

Expert search

According to [RK08] *expert search is seen as predecessor to SNS. The first approaches were following a yellow pages approach by offering search for name, company, know how keywords. Research in this field dealt with questions about how to communicate the expertise and how to make it searchable. This topic is also relevant for company internal knowledge management systems.* These company internal systems often generate this data automatically and users tend lack a certain motivation to keep the profiles up-to-date themselves.

A successor of this concept is found in all SNS. In business SNS it is a key feature. Xing even based their business model on the user question ‘who searched for my name lately’ by charging 6,- € per month for premium services (though the other important premium feature is the possibility to send personal messages). Expert search is the more efficient the more user information is disclosed in the profiles.

There this expert search is done in user generated profile, aided sometimes by automatic recommendations and most importantly replaced by the active communication between users with a user network.

This topic is very important for the thesis and will be elaborated in a later section.

Context awareness

According to [RK08] *context awareness is the awareness of a common context with other people. It can be user information about the same company they once worked at, the same university, the same people they know or common interests* (Xing shows a connection path via intermediate contacts according to the small world phenomenon). This is a ground laying functionality to create trust among users that is essential for collaboration!

This point is very important for the thesis topic. Trust generating and enhancing functionality is a corner stone of a collaboration solution to work at all.

Often certain kinds of visualization are used, like the path visualization in Xing which is very common. This topic is also relevant for enterprise topics because knowledge sharing as well depends on trust building among employees.

Contact management

According to [RK08] *contact management comprises all the features needed to manage the personal network. These functionalities can be maintaining the contacts list, tagging those contacts, access rights and roles for different levels of profile access.* A SNS offers a level of abstraction (either a nickname or the real name) as point of contact when triggering communication via the SNS. This means the contacts themselves manage and update their real email-address behind the nickname while the user manages the nicknames. This provides a way to have up-to-date contacts over years no matter if the people in the contacts have changed their working place in the mean time. It further requires for using the SNS service instead of the direct email addresses. Various ways exist how contact management is implemented among the leading SNS. Xing offers tagging, adding notes, StudViz allows deleting, Facebook lets you choose from a context cloud.

Network awareness

According to [RK08] *network awareness is the awareness of activities of contacts within the personal network.*

This functionality contributes a lot to the stickiness (time they stay online) of the users as well to viral effects. Examples are birthday reminders, new members, job offerings, new groups joined.

This can be realized via push and pull approaches. Push means the information is permanently displayed or displayed when the user logs in. Pull means the user has to use the search functionality actively to search for activities within his network.

For example Plaxo.com uses push technology in personalized weekly email newsletters with the intention to draw users back in to their platform by logging in and checking for more information about these activity notifications.

Exchange

According to [RK08] *the possibility to exchange and communicate with other users either directly via personal messages (some SNS like Xing charge for that feature) or indirectly via messaging boards, photo albums or guest-books or nick-pages is a standard feature of SNS.*

There are various creative new ways to communicate like micro-blogging (personal status messages like mobile short messages or Twitter messages about the personal status or the current personal mood or opinion about the world). These status messages are either shown everywhere on the website or within the personal network only next to the name in contact lists for example. They also remind everybody else of the existence of the user and contribute a lot to viral effects again.

Commons-based peer production

Yochai Benkler sums up the deduction of his Common Based Peer Production term in his book [YB06] by looking at the transaction costs theory of Ronald Coase (1937 – The nature of the firm) and Oliver Williamson (1973 – Transaction Cost Economics).

He argues that in the transaction based view the decision of doing something outside or inside the firm is based on whether doing it via the market pays off more gains minus transaction costs than doing it via the firm where the gains are reduced by the costs for managing and organizing. If the opposite is true firms tend to emerge and bring activities into a managed context.

This principle is completely neglected by the free software or open source movement, software under the GPL or LGPL license like Linux or Apache. Their emergence didn't rely on markets or managerial organization. The motivation for software developers was not or not only based on economic reasons. They were not told to participate. There also can be appropriation motivations on a long-term time horizon like potential consulting services around open source products, or positive effects on their CVs. Though the majority of users tends to be motivated by something else.

This seems to be a crucial point that is hard or even not at all possible to explain with economic theory of market-based, firm-based or hybrid models. This holds true especially for micro level (work on what project, with which tools, ..) decisions Benkler argues.

The term *networked information economy* is coined and defined as departing from *industrial information economy* by improving the power of non-market production.

This results in a new way of organizing production:

Radically decentralized, collaborative, and non-proprietary, sharing of resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without depending on market signals or managerial commands.

This is coined as being *commons-based peer production*.

“Commons” is understood as institutionalized structure about how to define rights of usage, access and control of resources. It is the opposite of property where a single owner can decide asymmetrically what to do and with whom.

Basically commons means no single person can control exclusively the usage of any particular resource in the commons. Instead it means resources can be used and disposed by anyone in an undefined or defined group with the responsibility to obey to either certain strict rules or to the there-is-no-rule rule.

It also indirectly refers to the GNU Public License and all the other open source licenses with stronger or weaker 'copy left' – not only for software artifacts, but also for media like sounds, text, images and videos.

Benkler suggests a classification of commons:

- defined or undefined group (defined groups can behave to the rest of the world like common property regimes instead of commons)
- regulated or unregulated (if regulated the regulation is always symmetric to all users) by certain rules

The fundamental message is that commons give the individual the freedom of choice with regard to resources managed by commons.

“Peer production” describes a subset of commons-based production possibilities. It refers to a production system that depends on individual action that is decentralized, self-selected and not hierarchically controlled.

A crucial point is the decentralization. Centralization usually is a response to the problem of how to align the behavior of many agents to cohere to an effective pattern or output. The key attribute is to separate the position where one has opportunities for action to choose from the authority deciding what actions the agents will undertake. In this context it is about limiting the number of people who are allowed to let them influence the behavioral patterns of others. This limiting is the role of firm managers, school teachers and so on.

Decentralization describes different conditions namely where actions of many agents cohere and are effective although no limiting of influential wills is necessary. A theoretical example for decentralization is the ideal market, where agents act independently, understand the will of others and react via the price system to that.

The conclusion is that we see a new form of effective collective actions taking place in the *networked information economy* that do not rely on the price system or some form of managerial organization.

This new networked environment also provides a more effective platform for non-profit organizations and individuals who up till now were not coordinated.

In general it provides a new way for dispersed agents to adopt decentralized cooperation strategies without using proprietary or contractual claims or managerial organization. This way of collaboration is new to the economic models but found in other systems like the scientific community. There the research agents act independently, contribute incrementally to the science know how of mankind without relying on market indicators or managerial organization (idealized).

The insight to this phenomenon suggests that in the future a lot of information and artifacts will be produced this way.

This insight is also a major contribution to the topic of this thesis and was the starting point for further investigations.

Crowd sourcing

Jeff Howe, a Wired magazine editor, is awarded as coining the term in 2006 and is also maintaining a blog on this topic [JH09].

Crowd sourcing is often used as synonym for open innovation and community-based design although it is something else in particular but can be interpreted in this way in general [MSN09]. Often it stands for the approach of companies putting out an open call for answers to a problem, task or question that would usually be worked on by their employees. Instead, volunteers, amateurs, experts and / or small companies contribute to the resolution on their own volition. Payment to participants can be in glory, pride, a flat fee / prize money or profit-sharing.

In a simplified view there are four different kinds of crowd sourcing [MSN09]:

- Assumption that masses are smarter than individuals
- Crowd creation
- Voting
- Crowd funding

In [CE09] they differentiate the various crowd sourcing approaches in a different way:

- Individual businesses or sites that channel the power of online crowds
- Brand-sponsored initiatives or forums that depend on crowd sourcing.
- Brand initiatives that allow users to customize their products
- Brand-sponsored competitions/challenges focused on crowd sourcing

This is elaborated in more detail in part two of the thesis.

Open innovation

Open Innovation as described by Chesbrough [HC03] is about the insight that companies don't have to do all the research themselves in-house as in the old days but instead can be open to external sources of ideas and research. Furthermore they can – the other way around - leverage their own research by applying it to new fields outside their regular business and by de-linking their capabilities and applying them to new innovations.

The awareness of this concept stems from looking at large enterprises with a technical orientation and heavy research investments.

The visualization best describes the basic concept in the form of the innovation funnel of the simplified new product development process [HC03].

There is also the approach of innovation scouts which are contracted by a company, sitting on the boundary of the innovation funnel. In this case they are middleman between companies and sources of innovation.

It is first about letting external ideas in and second about overcoming the functional fixedness and the local search bias. Once awareness is there and the challenges regarding new product development are de-linked from their origin new sources of innovation often from similar challenges from completely different industries can be leveraged.

An often cited example of applying open innovation to a large organizations strategy is Procter & Gamble who want 50% of innovation from outside [HS06]

Coordination vs. specialization costs

A very good elaboration about coordination economies and peer production can be found in [PP05]. It elaborates on coordination costs and transaction costs and that peer production basically taps in new areas of the distributed economies of scale of ultra-specialized peers and that supply-side network effects have to be taken into account. As a result peer production is more efficient than a firm in certain constellations (diseconomies of scale, transaction costs, coordination costs, knowledge sharing).

According to [TH05] we are currently in the age of 'Engage and Collaborate'. They summarize the development of enterprise organization in the following way:

- The 19th century was the age of Make and Trade - craftsmen sold there goods in local markets, little planning, forecasting and marketing
- The 1930s were Plan and Push - large firms centralized resources, decision-making, planning and marketing, tight control over proprietary resources and knowledge, firms were competing by way of superior internal capabilities

- 1985 was Sense and Respond - the firm was loosened, supply chains became more extended, standards more open, hierarchies flattened, work transition toward services and knowledge products, competition was extended to supply chains and not just firms
- And from 2005 on it is the age of Engage and Collaborate – firms can no longer rely on internal capabilities alone nor on their partners in the supply chain, instead they must engage and collaborate with everyone – partners, competitors, universities, governmental institutions and the customer.

This means over time the control is getting lower and loosened up while the complexity is getting higher.

This also means the next phase - in the midterm future - could continue this direction and result in even less control and more complexity and so forth.

Open source projects

As Benkler pointed out [YB06] open source projects initially were respected by the industry because of the product functionalities they produced and not because of the way these projects were initiated or organized.

Nowadays open source software products can often compete with professional products. Professional products still tend to have better marketing and design, but the core product functionalities and even the available complementary services of established open source products are often superior. Open source products are almost always prepared to be technically interfacing with other products (open source or commercial).

Because of the product quality the industry turned to the open source market. Still it seems that the nature of open source projects is accepted but not completely understood from an economic point of view.

In my opinion it is fair to say that with the evolution of the internet from 1993 on also the open source movement emerged and also contributed to the internet evolution. Without

open source software it wouldn't have been possible to have such a rich set of functionalities available. The first web browser for example was called Mosaic and was open source. Later it developed into Netscape. And even later Microsoft used the open source mosaic browser, re-branded it and called it Internet Explorer 1.0. So they built their first browser based on free open source software. In the long run open source software will probably dominate in certain areas where the developers have all the tools they need. That is why the area of eg. enterprise IT is not so populated with open source software because the necessary integration environment cannot be easily simulated.

Furthermore the idea of the internet or web as medium for sharing visual and audio content goes back to the late 60s.

This suggests that the idea behind open source of developing free software for mankind is very much connected to the idea of the internet of connecting mankind and offering a playground to try out new communication and content products and services.

Communication tools

The barriers of communication are analyzed in [MT01] for small world scenarios, small worlds being information diffusion efficient clustered networks. They tested high variance and equilibrium initial know how situations and found that it does make a difference how knowledge diffusion develops. Their finding is that the removal of communication barriers for knowledge sharing to work efficiently is crucial initially. In case they are removed uneven distributed knowledge does not hinder catch up of small world properties.

A distinction has to be made between the barriers initiating a communication and the communication itself.

Below are some remarks regarding the communication tools.

In [SC08] (Clay Shirky coined the term social software) it is pointed out that people tend to use the simplest most established and very simple communication tools for much longer than one would expect. This might also be an explanation of the success of mobile short

messages which currently finds its artificial new life in the ‘internet’ in the form of twitter.com. Email was introduced in the 70s as first means of enabling asynchronous group communication and it is today still the most common communication form in the internet. Email reduced transaction costs dramatically for group communications because it is basically free and works asynchronously.

It is also very likely that Skype as well established chat and conference call applications will stay around for a very long time.

Another example, mentioned in [TW08] of using simple communication tools in a different context is the example of the fast grown company Geek Squad where employees prefer to communicate with their peers via an virtual world (Battlefield2) online chat to collaborate and contribute to product innovation instead of using the intranet wiki setup for communicating to the large number of employees. The unorthodox use of the online shooting game chat is a form of self organization which lowers transaction costs and is highly efficient. Their business is to offer complementary installation and configuration services to home electronics equipment. This is their way of most effective communication, but has to be supported by the a matching company culture.

As a practical side note, this brings me to the conclusion that any collaboration solution which combines various concepts into a new one should not try to introduce any form of centralized communication hub or proprietary messaging tools. It should focus on matchmaking, discovery, team building, contact management and search. Project related communication should use simple tools like email, messaging boards, file upload. It is not about the communication tools used. It is about who communicates about what.

Social inertia

Even the research field of graph theory is employing a quantitative approach to various complex social systems among them also the field of collaboration networks. A paper [RM05] about social inertia in collaboration networks applies mathematical methods of weighted graphs from physics to social collaboration networks like the internet movie database (eg. producers / directors vs. actors collaborating on movie projects).

The vertices correspond to the objects in the system the edges model the interactions between the objects. The graph theory can be applied to any complex system, also human society and social systems where the edges represent social interactions. Due to the fact that nowadays enough digital data is available for social systems these quantitative methods can be applied eg. for collaboration networks in order to gain quantitative understanding for collective behavior. In their study they use actors only networks and weighted graphs to represent actors plus collaborations of the original bi-partite networks. The weight is basically counting the number of collaborations.

The social inertia is then defined by the number of collaborators vs. number of total collaborations and describes the tendency of the actors to repeat work with the same collaborators. It is observed for example that conservative actors tend to prefer to stick to collaborations with other conservative actors. Where as the growth simulation still seem to be at an infant stage and need further research.

It seems that inertia is a factor that has to be overcome especially when cold starting a platform from scratch. A practical consequence which results from that finding is that it is very hard to start a new collaboration platform from scratch without bringing in existing collaboration networks.

Another interesting side note to this approach is that although coming from physics it is very similar to automatic implicit recommender systems. An adoption of that approach to build collaboration recommendations which are nothing more than simple predictions based on past actions might make sense. Further more it builds a basis for all kinds of quantitative simulations within a SNS.

Potential further research projects in that field would be very helpful for the understanding of SNS dynamics.

Moonlighting

In the US the freelancer marketplaces are also used to connect to so called moonlighters who often have their focus in creative industries and do freelancing work in the evenings beside their full time jobs.

According to [KC95] (Who moonlights and why? – 1995) this phenomenon, especially in the US, is already very common for decades. Originally the main motive was to have additional income to overcome financial hardship or to compensate financial constraints of the primary job. The types of occupation (professional services, crafts, sales, ..) were distributed quite evenly. *Moonlighting is a tradeoff of additional income versus foregone leisure time. Additionally moonlighting is an expression of pursuing entrepreneurial activities while having the backup of a fixed job.*

The analysis of [KC95] comes to the conclusion that there exist various motives but the main motive from an economic point of view is the financial benefit.

PART II – Classification and combination of divergent concepts

In the second part of the thesis I want to try to create a classification of current business SNS, freelancer marketplaces, crowd sourcing and open innovation concepts by decomposing a few representative (high traffic) examples of the currently existing platforms. In part three a new combination of the de-linked main functionalities that are the basis for the opportunity analysis are suggested.

New classification of current concepts

The classification is suggested by using non-empirical qualitative differentiation criteria that are applied to currently available online offerings in this field.

Table 1 contains the list of websites used for this classification:

URL	Type	Region
Business SNS		
www.xing.de	Business SNS	German speaking countries, 7 million users
www.linkedin.com	Business SNS	US / worldwide, 40 million users
www.plaxo.com	Business SNS	US / worldwide
Freelancer Type 1		
elance.com	Freelancer Marketplace	US / worldwide
rentacoder.com	Freelancer Marketplace	US / worldwide
guru.com	Freelancer Marketplace	US / worldwide
Freelancer Type 2		
myhammer.de	Freelancer like Marketplace for Craftsman and Service Provider Reverse Auctioning	Localized, eg. Germany
blauarbeit.de	Smaller, same principle as myhammer.de	Germany
jobdoo.de	Smaller, same as myhammer.de	Germany
domystuff.com	Web 2.0 like my-hammer.de version	US
www.pajamanation.com	Micro entrepreneur marketplace for collaboration	Neutral

Crowd Sourcing Type 1		
threadless.com	Famous t-shirt community orchestrated by web-company	US / worldwide
chaordix.com	Company lets crows solve problem	US / worldwide
innovationexchange.com	Company problem is solved by teams following fixed process, broker- like middleman, consulting	US / Canada
Crowd Sourcing Type 2		
Wikipedia.org	Well known crowd sourcing encyclopedia	Neutral
Cambrianhouse.com	Crowd invents products, best ones get produced and marketed	Neutral
Crowdsprit.com	Electronic gadgets crowd creation	Neutral
Open source		
Sourceforge.net	Open source IT	Neutral
Apache.org	Apache foundation	Neutral
Corp.kaltura.com	Open source videos	Neutral

Table 1 – List of websites used for comparison of concepts

To simplify the classification the following groups are identified:

- **Business SNS:**

Current social network offerings for business networks like Xing or LinkedIn. Their basic functionalities are extensively described in part one of the thesis. Additionally to the SNS features they usually offer standard job classifieds.

- **Freelancer Type 1:**

Classic freelancer project sites like elance.com or rentacoder.com, they are IT project focused, are heavily used by offshore freelancers from India, Russia, Asia, have reverse-auctioning-like mechanisms to create competition among the freelancers on the price level, remote working is possible and mainly the case.

- **Freelancer Type 2:**

This is an emerging new concept of applying the freelancing marketplace concept to small craftsmen and services projects. They also heavily promote reverse

auctioning to create price pressure and in contrast to IT projects they are location based. That's why these kind of services have features like displaying maps and localizing the projects per country.

- **Crowd Sourcing Type 1:**

This group can be classified by crowd sourcing activities initiated by enterprises, either directly or in-directly via a broker. In case of a broker the company gets consulted how to formulate the problem and a fixed process how to submit solutions and how to build teams is pre-defined. Other examples are communities formed around a brand (Lego, Threadless). In these cases the community has decision power and is respected by the company in terms of open-innovation-like acceptance of input from outside the company.

- **Crowd Sourcing Type 2:**

This group assembles self-organized crowd sourcing activities which are not initiated by an enterprise. These crowd sourcing solutions are built upon some kind of virtual playground or framework where certain play rules and commons are pre-defined. But the topics the crowd is working on are not defined by a company looking for open innovation input but instead come from the crowd itself.

- **Open Source**

This group refers – in general - to classic open source initiatives. Nowadays there are hundreds of thousands of open source projects. Famous examples are the Linux itself, Netscape, Apache and so on. The most famous platform for listing these projects and giving them message board tools, file sharing and entry points to their external project websites is sourceforge.net. Of course all open source initiatives define certain commons and contributors offer their contribution for free. There are currently about 60-70 different open source licenses. Either with strong or weak 'copy left' (strong copy left would mean GPL like, weak means BSD like). There are also non-IT open source projects emerging, focusing on user generated content or on the necessary technology to enable non-proprietary codices for open source content (e.g. corp.kalture.com - - open source video solution)

These groupings are not intended to oversimplify the varieties and nuances of different solutions but instead are introduced in order to have some usable level of comparison.

There could also be more types of SNS or open source solutions in this comparison, but they would share the majority of the same parameters in this kind of comparison.

Eventually the classification was chosen to bring the main points of the idea to the surface and to provide an elaborated level for further discussions. Comparing divergent service offerings depends on the criteria of comparison. That is why the number of criteria in this comparison is high and thus involves a few different points of view. It seems that further research in this kind of comparisons might be interesting.

Discussion of the comparison of fundamental concepts

The following factors – enlisted in tables 2 to 4 - are taken into account partly as a consequence of the ground laying concepts of part 1 of the thesis, partly based on interpretation of the commonalities. The decision of how to assign the values to the various factors is based on analyzing the websites from table 1 on qualitative level.

	Business SNS	Freelancer Type 1	Freelancer Type 2	Crowd Sourcing Type 1	Crowd Sourcing Type 2	Open Source
Dominant Design established or Fluid Phase	Dominant Design	Dominant Design	Fluid	Fluid	Fluid	Dominant Design
Expected outcome of collaborations						
Contribution to Innovation	Low	Low	Low	High	High	High
Pure execution of labor as ordered, generating information or artifacts	No	Yes	Yes	No	No	No
Consulting (from Enterprise point of view) plus execution of labor	No	Possible	No	Possible	Possible	Possible
Consulting	Possible	Possible	No	Yes	Possible	No
Affected New Product Development Project Phase						
Idea generation	Possible	No	No	Yes	Yes	Possible
Conception (working	Possible	No	No	Yes	Yes	Yes

out idea to product/ service concept)						
Development / Production	No	Yes	Yes	No	No	Yes
Marketing / PR Sales	Yes	Possible	No	Possible	Possible	No
Explicit full time job offerings like on regular jobs classifieds	Yes	Possible	No	No	No	No
Implicit full job offering via message boards / discussion groups.	Yes	Yes	No	No	No	No
Open Innovation Approach	Possible	No	No	Yes	Yes	Yes
Basic Motivation						
Saving labor costs from Enterprise Point of View	No	Yes	Yes	Possible	No	Possible
Non-monetary goals	No	No	No	Enterprise: Possible Contributor: Yes	Enterprise: N/A Contributor: Yes	Enterprise: No Contributor: Yes
Compensating missing knowledge / specialization Enterprise / Contributor	No	Possible	Possible	Yes	No	No
Entrepreneurial Enterprise / Contributor	Possible	Yes	No	Possible	Possible	Yes
Fun Enterprise / Contributor	No	No	No	Yes	Yes	Yes
Majority of contributors are offshore (emerging markets)	No	Yes	No	No	No	No
Remote Working	Yes	Yes	No	Yes	Yes	Yes

possible						
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Table 2 – Comparison of fundamental concepts

Dominant design established or fluid phase:

I would suggest that regular business SNS are already following a common dominant design, whereas leisure and fun oriented non-business SNS seem to be in a longer lasting fluid phase – even though those SNS where the starting point of the SNS development. However business SNS have found a mature level for the time being and offer simple features everybody is used to. Non-business SNS are also dependent on fashion, content and zeitgeist related topics and try to keep up with various web related trends (twitter). Dominant design can also be found in open source projects and how they are organized (dealing mostly with software version control, collaboration during development, release and defect management). Also regular freelancer sites follow a dominant design of a project marketplace with two parties, namely enterprises and contractors.

Expected outcome of collaborations

Only in crowd sourcing and open source projects contributions to a new product development are expected. Freelancer marketplaces can often be about pure execution of work as ordered and not about inputting to the innovation process, they are price driven for the principal enterprises and earnings driven for the executing contractors. This accords to the moonlighting approach mentioned in part 1 of the thesis. From an enterprise point of view consulting without or without additional execution of work is possible especially for freelancer type 1 and crowd sourcing solutions.

Affected new product development project phase

The involvement into the idea generation phase seems only to be the case for crowd sourcing solutions. For business SNS it can be possible via direct messaging and for open source solutions the initial contributors might also be involved. The same is the case for the conception phase, although here open source solutions involve every contributor already.

The realization via software development or production is the key role of both types of freelancer solutions and also of open source solutions where the contributors are software developers themselves.

Involvement into marketing, sales and public relations is mainly done via business SNS solutions but also possible for brand focused crowd sourcing solutions. Freelancer type 1

solutions are used for creative industries related moonlighting like designing logos and marketing texts.

Explicit full time job offerings can be found in the classified section of business SNS and can be in the classified section of freelancer type 1 solutions. Via messaging boards and subsequent personal messages also implicit jobs offerings are possible.

Open innovation approach

The open innovation approach is only found in crowd sourcing solutions and open source projects. In freelancer solutions it is not found and in business SNS solutions it is not directly found but it could be the intention of contacting the personal network in order to ‘open up’ a project of ones company to let external ideas in, nevertheless this is not structurally taken care of by the SNS solutions but instead is done via personal messaging. Also expert search might play a role in this context.

Basic motivation

From an enterprise point of view to save labor costs is the main motivation to use freelancer websites. US type freelancer websites are therefore heavily frequented by offshore contractors from emerging markets with a low hourly rate.

Crowd sourcing type 1 solutions in case they are orchestrated by an enterprise might have the intention to outsource certain filtering and decisions processes about e.g. design (as is the case for the Thread less community) but the saved labor costs are then again invested in communicating with the community.

Involvement in open source projects might mean some saved labor costs if the company has established their business around complementary services of an open source product. An example among many is the content management tool Typo 3 where there are a lot of companies offering configuration and consulting services on a business to business level. But the main motivation in this case is to have a business model of offering complementary services.

Non-monetary goals of contributors to participate are only found for crowd sourcing and open source solutions. Enterprises might have non-monetary goals to organize (themselves or via a broker) crowd sourcing type 1 solutions for but often relate those efforts to promote their brand which accords to a marketing activity.

Apart from saving labor costs compensating missing knowledge might be a motivation for enterprises when using freelancer solutions. Also crowd sourcing approaches might contribute to missing in-house knowledge (eg. see also the innocentive.com solution). Apart from the freelancer type 2 solution all other groups might be considered entrepreneurial both from an enterprise as well as from a contributor point of view. 'Fun' as a motivation factor can only be considered for the contributors' point of view of crowd sourcing and open source solutions.

Majority of contributors are offshore

Only for freelancer type 1 solutions the majority of contributors are offshore coming from emerging countries like India, Russia, Rumania, China, Vietnam and Latin America. This results from the reverse auctioning and price pressure mechanism and from the way those mostly IT related outsourcing projects can be decoupled and easily be specified so that the contributors are actually exchangeable.

Remote working is possible for all solutions but the freelancer type 2 approach where craftsman services have to be executed locally. All the other solutions mainly deal with knowledge, creative design and IT artifacts.

Discussion of the comparison of different interaction initiation approaches

In this section attention is drawn to the way of how interaction between different players is initially established. The intention of this attempt is to find some more commonalities when looking at the classification from a different point of view.

Table 3 below enlists the various possibilities of how the business corporation is initiated.

	Business SNS	Freelancer Type 1	Freelancer Type 2	Crowd Sourcing Type 1	Crowd Sourcing Type 2	Open Source
Initiation of business leads						
Business-to-Business	Yes	Possible	No	No	No	No
Business-to-Contributor	Yes	Yes	Possible	Yes	Possible	Possible
Contributor-to-	Possible	Possible	Possible	Yes	Possible	Possible

Business						
Contributor-to-Contributor	Yes	Possible	Possible	Possible	Possible	Possible
Start Up Team Building	Possible	No	No	No	No	No
Initiation of job offers / projects						
Classifieds only	Possible	Yes	No	No	No	No
Orchestrated by Enterprise	Possible	Yes	Possible	Possible	No	No
Orchestrated by Broker	No	No	No	Yes	No	No
Self-organized	Possible	No	No	No	Yes	Yes
Team size						
Unilateral Principal-Agent relationship, no team or agent team	No	Possible	Possible	No	No	No
Team building	Possible	No	No	Possible	Possible	Yes
Searching for partners	Possible	No	No	Possible	Possible	Possible
Crowd Sourcing	No	No	No	Yes	Yes	Possible
Price pressure						
Price based	No	Yes	Yes	No	No	No
Know How/ Innovation based	Possible	No	No	Yes	Yes	Yes

Table 3 – Comparison of interaction initiation approaches

Initiation of business leads

Business-to-business contacts are the main focus of business SNS (the second focus is searching for a new job within the personal network). A common scenario might be that an employee of enterprise A is contacting a former colleague or classmate within his personal network or someone he found via expert search outside his personal network now working at enterprise B to establish a business lead for a concrete (e.g. sales) project. In this case the business SNS represents a concrete sales channel. This also is an example of how to profit from the concept of weak ties.

Another business-to-business situation is found when a freelancing contractor is a outsourcing company (e.g. in China) and not a single individual.

All other combinations like business-to-contributor, contributor-to-business and contributor-to-contributor situations for interaction initiation can be found in all solutions. The contributor-to-contributor situation in case of business SNS is found when he

contributors are freelancers or small company leaders themselves or are searching for start-up partners.

Regarding concrete start up projects with commercial background business SNS offer the primary way to connect to potential new business partners by offering message boards for founders and various other groups of interest.

In these cases the contact is established by postings to message boards and / or a direct message to SNS members. Currently it seems that this still is the major way of building a team of people who are outside of the already existing personal network.

Initiation of job offers

This comparison looks at how it is initially communicated that a job offer is available. Job offer in this case either means temporary job in the form of a project as well as a full time job offer.

The classifieds-only approach (plain list of job postings only, grouped by categories and sorted by date) can be found in freelancer type 1 solutions where this is the main form of job offer communication. It is also possible in business SNS.

That the main source of job offerings is an enterprise holds true for freelancer solutions as well as business SNS and crowd sourcing type 1 solutions.

For crowd sourcing type 1 solutions also a broker can overtake and establish the communication of project offerings and challenges.

Self-organized in the context of job offerings means that the crowd, the community or a team of people defines themselves what to do next and what projects to initiate. This is mainly the case for open source projects and self-organized crowd sourcing type 2 solutions. In case the business SNS is used to build an entrepreneurial team it can also be found there.

Team size

A unilateral principal-agent relationship is only found in freelancer solutions. In this case the enterprise searching for an outsourcing contractor is the principal and the agent is a individual contractor or a small offshore contractor company or team.

Team building (in the sense of forming a team to collaborate on a given project) is not supported by freelancer solutions but by all the other solutions. Open source solutions always build some sort of team, either a small core team or a large community.

Also ‘searching for partners’ (in the sense of searching for partners to initiate a new project with them) is possible for all but freelancer solutions.

The crowd sourcing concept in regards to team building is also found in open source projects and thus open source projects with a big community can also be seen as crowd sourcing type 2 solutions.

Price pressure

The price pressure is a defining factor for freelancer solutions. Reverse-auctioning mechanism makes the process of bidding the lowest price in order to get a project transparent. The focus is on low price instead of quality. Further remarks on this principle are found in a subsequent section.

All the other solutions are independent of price pressure apart from price in the form of effort invested (eg. in implementing certain features in an open source software project within a given time frame). They are in know-how and optionally also innovation based.

Discussion of the comparison of different SNS functionalities

In the following the SNS functionalities [RK08] are considered and it is attempted to find similarities in the other functional groups. Table 4 enlists those SNS functionalities already mentioned in part one of the thesis.

	Business SNS	Freelancer Type 1	Freelancer Type 2	Crowd Sourcing Type 1	Crowd Sourcing Type 2	Open Source
SNS classifications [RK08] applicable:						
Identify management	Yes	Yes	Possible	No	No	No
Expert finding	Yes	Yes	Yes	No	No	No
Context awareness	Yes	No	No	No	No	No
Contact management	Yes	Possible	No	No	No	No
Network awareness	Yes	No	No	No	No	Possible (indirectly via notifications about sw

						updates)
Exchange	Yes	Yes	Yes	Yes	Yes	Yes

Table 4 – Applicability of SNS functionalities

The SNS functionalities of identity management and expert finding are only present in freelancer solutions, basically in the form of profile pages and the search functionality for profile pages. In open source projects the focus is on the artifacts and not on the authors.

Therefore search for artifacts (e.g. software) is the way to find people.

Context awareness in the SNS sense is not found in other solutions at the moment.

Contact management and also the presence of an alias or nickname as contact point is mainly found in SNS solutions only. Aliases are used as user login in basically all websites offering logins though.

Network awareness can be found in the form of messages to software repository updates.

Exchange (communication) functionalities are found in all solutions.

It is interesting to see that the main difference between SNS and freelancer solutions in this comparison is based on the missing functionality of context awareness, network awareness and partly contact management.

Furthermore it is also interesting that crowd sourcing and open source solutions have nearly no commonalities with SNS in this comparison.

In part three of the thesis some of the above mentioned comparison criteria will be identified as key features for a new kind of collaboration solution.

Important points to consider are

- the roles of the stakeholders (enterprise, contributor),
- the basic motivation to participate,
- the way of initiating the contact to new members,
- also there is a difference if the topic of collaboration is within an existing enterprise context or about a startup project
- furthermore projects can be profit or non-profit oriented
- private or professional

In part three of the thesis these aspects will combined with comparisons of table 1-4.

Remarks about freelancer sites

Classical freelancer web solutions are around already for a long time. Still they give insight to the basic motivations. Interestingly they are not that sophisticated in Europe (especially in German speaking countries) as they are in the US where moonlighting already has a long tradition. They seem to have their roots in yellow page applications.

Yellow pages:

In the pre-internet era old-fashioned yellow-page listing service providers have been the standard way to find craftsman or service providers. In these printed listings they were grouped by industry and included advertisements and some sort of keywords as part of the grouping to describe their business areas briefly.

Internet classifieds are still based on this principle. Also Austrian websites like werliefertwas.at or herold.at are new variations of yellow-pages. Still yellow-pages (as an extreme in their printed form) represented one-way applications where no direct interaction takes place in a timely manner during the discovery process (eg. the process where a user or company searches for a service provider).

One-way principal agent approach

This might explain why freelancer solutions still follow such a one-way approach.

The collaborative approach of freelancer project sites is following a principal-agent approach. The discovery process is one-way.

There are basically three stakeholders at any time:

- The principals / project owners who want to outsource a certain sub-project of their larger project. The principals are enterprises or entrepreneurs. Sometimes they are just private individuals.
- The agents or contractors who are executing the work they where hired for
- The platform hosts who earn their commissions by running the principal-agent match making platform

The discovery process has basically two options:

- Either a principal is searching for an agent by posting to the classifieds section or by scanning through the contractor profile pages
- Or a contractor is replying to a classifieds ad

Recommendations

Recommendations are the first add-on to the yellow-pages approach because they establish trust and they allow the access to the cumulated experience of the community.

Because of a certain social pressure they might not be too extreme in cases where someone was disappointed with certain projects.

Price pressure – reverse auctions

Reverse auctions are the next add-on to the yellow-pages approach. They bring the overall prices of hourly rates down.

This feature has two functions: First it takes care of the price attractiveness of freelancing offers. One of the main motivations for enterprises in a principal role is to save costs by outsourcing and therefore to use such freelancer web solutions because of the reverse auctioning price mechanism. It also allows principals to set a maximum price willing to pay, which actively sets price to a certain low range before bidding starts.

Secondly, they make it possible for principals to choose an agent by just comparing the best price offerings by agents with their references and with the recommendations (comments, ratings).

The advantage is that the entry barrier for freelancers is lowered because everybody with the necessary skill, after overcoming the startup phase where references have to be build up has the chance to offer his services given that he also offers an attractive price.

On the other hand these low prices are the reason why these freelancer solutions are so heavily frequented by contractors (individuals or small companies) of emerging markets which can afford to work at such low rates all the time.

Sometimes contractors accept to work for low hourly rates to intermediately bridge phases where they have no other projects to work for. This might also be the case for freelancer type 2 solutions. Applying for projects is often time consuming for bidders, especially for freelancer type 1 solutions, because of the necessary information required by the principal and the competition of other freelancers who try to offer a lower price to get the project, this reverse auctioning process requires the bidder to monitor the other bids for some time.

Penalties for bypassing project marketplace

As mentioned in part one of the thesis ‘social inertia’ is a common behavior of agents in a social network. It is basically the tendency to stick to a certain group of people from former collaborations when building new teams for new projects. This natural behavior poses a potential problem for freelancer marketplaces. Because these marketplaces build their business model on a certain commission on each earning from the contractor (e.g. 15%)

Social inertia would motivate a principal and an agent to collaborate and circumvent the freelancer marketplace for the next project. This is why there are marketplaces like guru.com which charge penalties if buyers (principals) and sellers (agents) do work outside of the scope of guru.com for projects <500 USD.

So for small project they charge penalties, but still they can’t monitor what all players do exactly. So it depends more on whistle-blowing by other agents.

In general such a commission based approach is used by most marketplaces also, from different fields (e.g. ebay).

No involvement in specification

The concept behind the freelancer project sites is about realization and execution of already existing requirements, designs and specifications. The only room for a contractor to contribute requirements related creativity is in cases where the granularity of specifications is too rough and detail specifications are needed or where creative design is part of the project execution.

But in general freelancer projects do not involve the freelancer in the idea generation or conception phase. This leads to the dilemma that everything that is outsourced needs to be specified in order to prevent too many necessary incremental improvement iterations which again would produce coordination costs for the principal. On the other hand e.g. agile software development methods and new product development prototype phases in general are based on the principle that incremental improvement iterations are the only feasible way to develop a new product.

If the freelancer is not involved in the specification phase this incremental approach gets very inefficient for both parties. Still it seems that there is no solution to the problem of how to involve freelancers (and especially offshore freelancers) in the prototype and initial design phase without losing a lot of time in specification and communication overhead, which are basically freelancer transaction costs.

On the other hand these prototype developments are predestined to be outsourced to freelancers either in case of entrepreneurs or enterprises in the role of principals.

My conclusion is that involving the freelancer in the specification and design phase would simply save communication and specification overhead and additionally would follow an open innovation like approach that could lead to new input from outside. This kind of involvement usually leads to additional motivation which goes beyond the monetary aspect. This approach should not be confused with an excuse for not knowing how to design a certain product feature and hoping that the freelancer will guess what to do. This then would lead to different kinds of inefficiencies.

New concepts are scarce

Pajamanation.com is one of the very few examples at the moment which already offers a collaboration marketplace that can also be seen as mixture of freelancer and crowd sourcing approach. Still it uses reverse auctioning and thus qualifies as freelancer solution. *It is a reverse auction site connecting micropreneurs and micro-workers for microjobs. Microjobs are small project jobs that usually take less than a week. Payment is directly invoiced by the homeworkers themselves who have subscribed to Pajamanation. Most of the subscribers belong to the knowledge worker category.*

Collaboration tools

Collaboration tools for eg. agile software development or collaboration during a project in general are a whole different topic.

There are already established progressive solutions like basecamp.com available for project management in general. And also various solutions for agile software development, collaboration and version control like e.g. collab.net.

These examples are just mentioned to point out that they are about enabling and optimizing collaboration once a project is up and running while the topic of this thesis is focusing on initiating a project and finding partners and contributors for a project. Collaboration as a term is often used in the sense of project tools and in the sense of team building and discovery process of contributors.

And there are also extremes available like predefined work descriptions for full time offshore employees e.g. offered by virtualemployee.com.

Remarks about crowd sourcing solutions

In part two of the thesis the distinction is made between two kinds of crowd sourcing solutions. The first type is defined as being initiated by enterprises, either directly or indirectly via a broker. These solutions are either problem-solving oriented (innocentive.com, innovationexchange.com) or brand focused (Threadless, Lego).

Crowd sourcing type 1 approach

The brand focused solutions are more sophisticated in their various characteristics and are very much centered at the brand (and target group) specific product issues and customizations.

The problem-solving solutions are pretty straightforward in their concept. Basically an enterprise is looking for a solution to their problem, a contest is made, solutions are submitted, the winner gets the prize money. In its way this kind of crowd sourcing is a bit like a freelancer approach but looking for input for the specification phase, often in scientific areas. The contributor is not chosen ex-ante by choosing the lowest price but instead ex-post by choosing the best submission!

Innocentive is the well-known example of the crowd sourcing type 1 approach, focusing basically on: the ideation process and submitting high level pen and paper solutions.

IX Innovation Exchange (<http://www.innovationexchange.com>) is an example of a crowd sourcing which institutionalized the crowd sourcing process in a form which is

representative for this kind of approach. They are hosting the crowd sourcing platform and offer consulting services to their clients (called sponsors below) on how to formulate their problem. So basically they offer a crowd sourcing solution and provide the complementary consulting. This is a very simple and yet feasible approach to tackle the crowd sourcing topic.

They position themselves as open innovation marketplace with a web based community of smart people (innovators) solving challenges of large enterprises or non-profit organizations (sponsors). They have the following approach (this is taken from the IX website but is representative for similar organized crowd sourcing solutions, with the extension of team building which is not that heavily promoted in other crowd sourcing solutions)

- the broker works with the sponsor to define a ‘challenge’
- innovators review the challenge and decide if they respond and if they do that by forming or joining a team or alone
- once an innovator decides to work on a challenge he can actively search for a team
- the team collaborates
- the team submits the solution
- the sponsor selects the winner, who then gets (as the only one) the prize money

It is more an open innovation than a crowd sourcing approach. IX still takes the lead on these projects like a consulting company. They consult the sponsors. They let the ‘crowd’ only work following a strict predefined process.

It is all about challenges or problems to be solved with a big company as sponsor.

Innovators can be individuals or small companies searching for project work.

They are guiding the sponsor company through the process of connecting to the crowd and choosing from a number of resulting submissions. The motivation for the innovators is not pride but more the prize money.

They are kind of offering the complementary service to the open innovation process.

That’s why they keep the process strict and why they probably don’t want the innovators directly deal with the sponsors to prevent circumventing their platform. The SNS aspect of the solution is minor. It is not supporting much entrepreneurial activities among the innovators. All activities are focused on working on the challenges.

Crowd sourcing type 2 approach

The second type is about solutions that are self-organized within certain boundaries. The most prominent example is Wikipedia. This kind of crowd sourcing solutions are based on the following principle:

- a platform is created which represents a playground and
- a 'meta'-topic is defined e.g. encyclopedia
- initially it is not planned that what the crowd does is censored by anybody
(though recently even Wikipedia started efforts in this direction)

Thus such a platform can be used by many users to collaboratively create artifacts of value. Usually without any monetary benefits directly connected to those efforts. Indirectly they may benefit in various ways similar to the open source situation e.g. through building a personal network, fame and marketing their blog.

Suggested by [MH07] the following classification (for crowd sourcing type 2) can be done:

- creation
- organization of information
- prediction markets

Prediction markets are interesting for crowd sourcing like predictions about election results or stock markets. In a way the world wide stock markets are prediction markets itself with very different kind of players.

Organization of information is also an interesting aspect. Solutions like StumbleUp (web links browser plug-in) and Digg which is a crowd sourcing solution for highlighting links that might be interesting for the other users are prominent samples.

Even the Amazon.com user ratings and wish-lists can be accorded to that crowd sourcing category (which in a wider sense would bring up the long-tail theory by Chris Anderson [CA08]).

In [CE09] over 130 crowd sourcing samples are categorized. As mentioned in part one of the thesis they come up with a classification of 4 categories which can be combined to 3 categories:

- Individual businesses that channel the power of online crowds (Threadless – T-Shirts, CrowdSpirit – Electronic Gadgets)
- Brand-sponsored initiatives that depend on crowd sourcing and brand-sponsored competitions / challenges focused on crowd sourcing (a contest as part of marketing activities)
- Customization brand initiatives (mass customization examples like Lego, Adidas)

This classification mixes my classification of type 1 (Threadless) and type 2 (CrowdSpirit) but on the other hand splits up the two brand initiated contests and challenges. The explanation is that my classification was looking at this concept from the self-organization point of view.

A clear distinction can be made regarding the goals of an enterprise engaging in a crowd sourcing project:

- either the enterprise defines what kind of challenge the crowd should solve and they select the winner
- or they want to establish a sustained exchange with a community (like Threadless) where they seek for permanent input and feedback

It remains unclear if teams within a crowd still qualify as crowd sourcing approach. If this is the case it is hard to define where to draw the line between crowds and large teams.

Early critics of crowd sourcing (Dumbness of Crowds, [DC07]) argued that collective intelligence is seen when many people upload and manage their *own* photos eg. on Flickr, while it is the ‘dumbness of crowds’ when many people author eg. an Wikipedia article or design a Threadless t-shirt. Their main argument was that input of the individual to the crowd effort is lowered and diluted: *is blindly averaging the input of many different people, and expecting a breakthrough. (It's not always the averaging that's the problem it's the blindly part)*. And they argued that crowds tend to seek consensus leading to mediocre incremental approaches and no breakthrough ideas.

It might be the case that certain initial breakthroughs are more likely to be achieved by individuals but that does not mean that a lot of other activities aren't much better handled by crowds than by an individual or a small group of individuals. It just depends on what the goal is and crowd sourcing should not be seen as solution for everything.

A recent proof of the wisdom of crowds is that even Microsoft gave up and will stop its Microsoft Encarta encyclopedia product because of the success and performance of Wikipedia.

PART III - Opportunity analysis and product ideas

Vision

The realization could be based on leveraging those ideas on top of a new kind of crowd sourcing community. The goal would be to develop a social networking and collaboration solution which supports team building and matchmaking, where private individuals, micro entrepreneurs or enterprises identify and build teams to work on small and midterm projects. The difference to freelancer sites is the involvement of the team members in other phases of the project than just the implementation or execution phase. Approaches of open innovation can be utilized. It provides a networking tool for entrepreneurs looking for partners to realize ideas. It offers an opportunity for entrepreneurial people having a day job and looking for ways to monetize their talents in side activities. It helps people with good ideas lacking a real world network of partners to use this kind of solution to build their virtual company together with other people they just met online in a way otherwise not possible.

It offers enterprises a way to open up on a project level to involve external contributors bringing in new ideas and specialized expertise without raising the transaction costs. It changes the way companies work with offshore software developers who are usually treated as code monkeys cheaply executing orders. Offshore partners nowadays are seen as cheap workforce and not as contributors. With such a solution a new level of collaboration with offshore partners can be supported. Projects are not contracted just on low-cost objectives but on quality and experience parameters.

Adding crowd sourcing to those elements would mean that on top of a crowd sourcing community which can be utilized by enterprises as well as micro entrepreneurs a critical mass of talent and potential contributors to potential projects is built. The crowd sourcing aspect could be used to attract people initially in order to vote on ideas or let others vote for their ideas.

Harvesting the potential and empowering the innovators working outside corporate boundaries.

Market

According to the comScore, Inc. market data [CS09] the global internet audience has surpassed the 1 billion user level. comScore CEO Magid Abraham comments this press release on the following way: *“It is a monument to the increasingly unified global community in which we live and reminds us that the world truly is becoming more flat. The second billion will be online before we know it, and the third billion will arrive even faster than that, until we have a truly global network of interconnected people and ideas that transcend borders and cultural boundaries.”*

Looking at the US market [CS109]: *reflecting the times, job search was the fastest growing website category, growing 51 percent in 2008.*

According to [RA07] international corporations already actively plan in talent pools from emerging markets, the so called N-Geners from India, China, Eastern Europe and Latin America, into their human resources strategy because they are soon to be running out of workforce from the baby-boomer generation otherwise.

Norms	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
Innovation	52%	80%	92%	79%	74%	72%	67%	81%	79%
Customization	77%	77%	94%	79%	81%	50%	57%	78%	74%
Entertainment	68%	80%	84%	56%	91%	56%	71%	74%	73%
Freedom	75%	73%	83%	69%	67%	70%	63%	74%	72%
Scrutiny	75%	70%	84%	75%	74%	54%	53%	73%	70%
Collaboration	71%	63%	91%	77%	31%	26%	40%	67%	62%
Integrity	65%	65%	93%	77%	48%	51%	41%	66%	63%
Speed	63%	25%	42%	83%	38%	33%	37%	44%	42%
Which do you want to do?	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
Work for one or two companies	55%	62%	62%	65%	75%	72%	65%	60%	61%
Work for a variety of companies	45%	38%	38%	35%	25%	28%	35%	40%	39%
I agree/strongly agree with the following:	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
At work, I can get the info I need to do my job quickly	77%	76%	91%	80%	72%	60%	56%	77%	74%
I need to do a variety of things at work/hot too much routine	75%	77%	90%	78%	75%	48%	63%	76%	72%
I have a really good friend at work	78%	72%	93%	79%	50%	51%	59%	73%	71%
I have enough flexibility in my work schedule...	74%	75%	91%	75%	47%	55%	53%	74%	71%
I receive enough recognition for doing good work	75%	70%	90%	76%	56%	45%	41%	73%	69%
I receive explicit feedback when things don't go well	71%	69%	87%	61%	66%	45%	49%	68%	64%
I will take the lead to discuss professional development...	76%	59%	90%	54%	61%	51%	49%	68%	64%
I have good opportunities for career advancement	76%	55%	91%	77%	62%	41%	43%	67%	63%
I am satisfied with my current work experience	72%	53%	90%	75%	57%	50%	48%	64%	62%
Who is your ideal employer?	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
For-profit company	62%	65%	62%	71%	69%	55%	46%	69%	64%
Government	24%	25%	14%	23%	16%	20%	33%	23%	23%
Non-profit organization	14%	10%	4%	6%	15%	25%	21%	12%	13%
If you could work anywhere, where would you work?	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
For yourself	24%	33%	12%	21%	35%	35%	36%	28%	29%
At a medium-sized organization...	26%	22%	25%	13%	14%	15%	13%	23%	22%
At a large organization...	22%	18%	43%	30%	12%	26%	31%	21%	23%
At one of the largest organizations...	14%	17%	5%	16%	13%	7%	12%	15%	14%
At a small organization...	12%	11%	16%	18%	26%	30%	31%	13%	15%
I agree/strongly agree that the following is important in an employer:	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
How much I am paid	85%	84%	89%	83%	82%	82%	78%	85%	85%
The prestige of the company	83%	86%	89%	81%	75%	51%	59%	85%	81%
Having technologies in the workplace...	87%	82%	88%	83%	88%	72%	69%	85%	83%
The ability to work on international projects	84%	70%	86%	80%	71%	30%	48%	77%	71%
Having a mentor that looks out for me	72%	79%	86%	77%	54%	59%	45%	75%	72%
International travel	81%	60%	88%	80%	60%	32%	42%	71%	66%
Being able to work in a variety of jobs for same employer	79%	61%	88%	77%	35%	57%	61%	70%	69%
N-Gen Population	India	China	Mexico	Brazil	Russia	N.Am	W.Eu	Rising	World
	419	424	41	68	41	83	58	992	1,171

Note: Regional percentages are weighted averages based on countries' N-Gen populations

Source: U.S. Census Bureau, International Database; New Paradigm

Figure 3: Global survey from [RA07] - work attitude of N-Geners

Although this study is from the year 2007, before the current financial and economic crisis, it will be still valid as soon as the job markets stabilize.

The point is that international corporations diversify their worldwide locations actively into these emerging countries not only to save costs but instead to tap into the immense motivated talent pool that is available there. Of course there are regional differences in attitude and mentality towards innovation, freedom and expected company culture, see Figure 3 for a global survey on work attitude related questions.

So the growing internet population is ‘flattening the world’ in the sense that distinct parts of the world grow together and barriers of communication and collaboration are flattened, (also see [FT06] - btw. also taking a contrarian’s stand point on the wisdom of crowds approach, but coining the term ‘The world is flat’). Talent pools from emerging markets are recognized and international corporations are already positioning themselves. Crowd sourcing is around for some time already but the opportunities it provides are far from fully exploited yet.

SNS continue to grow at high rates year over year.

And a new kind of freelancer marketplace is overdue but still not yet available.

In the US currently ‘home-shoring’ freelancer jobs do face significant growth versus off-shoring according to odesk.com, a US-based freelancer solution [OD09].

SNS still face triple-digit growth rates, twitter.com has currently even a growth rate of 1382% according to Nielsen Online [TW09].

Product ideas

Once the design phase of such a solution takes shape a lot of additional detailed feature ideas will come up. Below is an elaboration of the basic set of product features which will be the starting point for the design phase and product related discussions.

Building on a crowd sourcing solution:

The basic approach to realize the idea of the thesis would be to establish a crowd sourcing solution for the German and English speaking European market. The focus for lead generation in the beginning would be the German speaking countries and international corporations which do have decision power for their activities in the German speaking

market or regional corporations. This would be the basic approach to provide crowd sourcing type 1 functionality.

The idea of the thesis is not to provide a crowd sourcing only solution but instead the combination of crowd sourcing, freelancer marketplace, SNS and open source project marketplace. The crowd sourcing functionality would instead be used to draw enterprises and contributors to the solution and to have a clear and simple communication line for the marketing initiatives and lead generation. Furthermore this approach would provide a commission based revenue source for the marketplace.

In the German speaking market the crowd sourcing topic has not yet ‘arrived’. Although brand-initiated (e.g. Adidas) crowd sourcing solutions do exist they are currently not yet clearly identified as such by the media and audience.

As so often with other trends from the US this provides a possibility to import that approach to the German speaking market.

On top of this straight forward and ground laying approach which provides the basis for the first lead generation the actual idea of this thesis could be build on top, namely a new kind of market- and collaboration place.

In the following the potential functionalities of this idea are described. They are based on the analysis in part one and two of the thesis.

Building critical mass

The idea behind the crowd sourcing basis is to build a critical mass of contributors. Another aspect to take into account is the *social inertia* regarding collaborations. Existing collaborations and teams outside the solution won’t be easily changed. This means a way has to be found to motivate such teams to register at the solutions and to get connected via this solution, similar to other SNS. This is definitely a mostly marketing related challenge.

Enterprise as sponsor

The crowd sourcing type 1 part of the solution would be kept flexible to easily adapt to enterprise specific crowd sourcing challenges. More than one pre-defined process would be possible. Also the concept that there is only one winner of such an idea competition

could be adapted to have more winning teams with weighted prize money depending on their input to the solution of a challenge.

For brand initiatives white-labeled micro-sites can be provided and customized with little effort.

Self-organization

Apart from the enterprise corner, where the topics are defined by the enterprise challenges, the solution should provide a platform that is basically a set of tools that represent the framework for a collaboration marketplace. The kind of collaborations and the kind of topics that are chosen is completely up to the contributors.

In this sense self-organization in the form of team building and partnering to collaborate on a certain projects should be possible.

Also for contributors participating on enterprise challenges certain self-organization opportunities should be promoted.

SNS functionalities

Identity management, context awareness and expert search are the most relevant SNS functionalities.

Common identity management can be enhanced by:

- video functionality
- ebay-like ratings about successfully completed projects
- traffic light availability status (green – available, orange – from certain date on available, red – not available in the next 6 months or longer)

Context awareness would mean not only how the peers are connected via contact lists entries of each other but also via a second dimension, namely former collaborations. This extends the *weak ties* approach in various ways. This can be spun further if e.g. teams worked on the same or similar challenges.

New kind of freelancer marketplace

Ideas for extensions to the classical freelancer concept are:

- Highlighting the affected project phase of new product development process. This would mean part of the project offer is the project phase which is concerned. A simplification could be done by defining three phases like – ideation, production/ execution, marketing / role-out.
- Special attention to different mentality of offshore contributors, identifying their main motivation beside payment.
- Due to omitting the reverse-auctioning functionality, the price level will be above reverse auctioning freelancer marketplaces.
- Different ways of initiating job offers – when planning the marketplace web platform special care needs to be drawn to the various ways of how a job offer can be initiated
- Different approaches for larger and micro projects could make sense, because they have completely different goals. Currently freelancer marketplaces tend to treat ‘projects’ all the same.

To overcome communication barriers new ways of applying video services can be tested, e.g. the use of videos to build up trust during the team building phase or around project milestones.

Brainstorming sessions and consulting in the form of brainstorming projects could also be a viable option.

Expert search / finding

Expert search solutions within SNS are still not researched enough.

Finding new ways of how to bring people together beyond conventional ways are needed, conventional ways are e.g.:

- they already know each other
- a yellow pages like search for keywords or company names in profiles
- discussion board or other ways of actively seeking co-operations by posting basically and ad and by replying to requests via individual messages
- automatically generated recommendations, which can be good but lack a constant level of quality and depend on a lot of factors to work well at all. Compare

Amazon (implicit) recommendation engine, they have probably the worldwide best recommendation system and still it brings up unsteady quality results.

This definitely represents an opportunity to come up with a solution which goes beyond these conventional approaches, a kind that let's both parties participate actively on the search. There by also overcoming a potential motivation problem which might occur when this is an one-sided approach.

The expert search represents one of the core functionalities of a project marketplace. It is all about finding the right people. Potential extensions to classical approaches could be:

- either more indirect ways by offering a set of questions like a test
- or open discussions about a certain issue
- better automatic recommendation similar to matchmaking platforms
- personal recommendations via the network, the peer recommend actively colleagues from there network to someone connected via weak ties

Virtual company and team building

Whether it is for for-profit, non-profit or private projects – virtual and temporary company / team building might be an interesting concept.

Often the realization of an idea just fails because of the missing organization, team and skills within the own personal network. That is one of the core ideas of this thesis.

It can be an internet start-up, a social entrepreneurship project like helping farmers in Africa with know-how about agriculture or it can even be a private micro-project like e.g. someone from Europe wants to buy a car in California and needs someone there to verify and to check some offers locally on person.

The concept would be to be able to use the solution to build a temporary virtual company consisting of other contributors who don't have to necessarily be part of the personal network. This could be seen as finishing a puzzle. A map of necessary skills / roles is created and the project is described. Some roles are already filled with contributors from the personal networks and some roles are still missing. The missing one is open for proposals.

On the profile pages of contributors their skills are summarized in keywords and their availability status is depicted in the form of traffic light. Also their expectation of it and how they want to get paid for their work is described, this could be:

- monetary
- or in form of a favor

Automatic recommendations make suggestions for potential contributors filling the missing puzzle pieces.

Discussion boards

There could be an extension to the concept of usual discussion boards by implementing a link between discussion board threads and descriptions from project offers.

Like in other SNS (e.g. Xing) there could be the possibility to subscribe to discussion topics – for this solution the consequences would be that notifications could be sent out when new messages or related project offers are posted.

Notifications

All kind of notifications are needed to motivate contributors to frequently come back to the platform. Above mentioned discussion board and project description notification are important. Also there could be some sort of keyword based subscription in order to filter out interesting project offers. This could be combined with a premium service

No price-pressure

A freelancer project marketplace in a classical sense can still be provided. But the usual reverse-auctioning is not in favor of the open innovation approach. Omitting this feature will shift the focus from price differentiation to quality differentiation.

Competing with reverse-auctioning freelancer sites will not be possible for cost-aware small projects.

The argumentation line for this approach might be to point out that the output of larger projects does depend very much on quality which in turn also reduces and shortens the necessary incremental iterations often needed in larger projects (especially IT projects). Project sponsors who value quality will appreciate this approach but it will be hard to communicate it to sponsors with less experience in outsourcing projects or to sponsors

with a lot of experience who depend on the low costs of eg. solely calculating their project budgets with offshore freelancer costs.

Still some trade off needs to be found between reasonable prices and a different approach for involving freelancers. The idea is to actively promote the involvement of freelancers into other, earlier project phases especially the specification phase.

Also the prototype phase should actively be promoted and bivalent exchange during such a project phase should be motivated by offering certain reporting tools.

The reporting tools should be flexible and different for various kinds of project. Specially designed reports for collaborating with offshore freelancers should be provided. Also here video reports would be an option.

Social entrepreneurship

Another potential niche of the solution could be serving as a gateway to social entrepreneurship projects. Helping people in developing countries with monetary aid and / or know-how to build a basis for a better future and to overcome hardship.

This would also be a good way of building up a community of non-profit knowledge contributors like medical doctors, agricultural experts, technicians.

These kind of projects could also be organized in a crowd sourcing type 2 way.

Connecting to external SNS

Cooperation and partnering with existing SNS could be an option and would help to reach the critical mass of users easily without a cold start. But this heavily depends on successful business development activities.

The positioning for these activities could be to argue that the solution offers complementary services to existing SNS.

Online community marketing activities

As usual with community centered platforms special attention needs to be drawn to online community marketing activities. These could be

- Best Practices guides about projects
- Literature tips
- Success stories

- Presenting companies
- Presenting industries
- Presenting the current state of the art in certain fields as basis for enterprise challenges

Strategic positioning

As mentioned above the solution could be positioned as crowd sourcing solution in the beginning. In order to attract contributors which are the basis for team building and networking. The second aspect would be that this approach would provide a clear communication line. Because of the fluid design many features might need some testing in the community. Building on a solid crowd sourcing type 1 approach would provide the necessary stability for these experiments.

The product is in a fluid phase but parts of the market, especially the freelancer market are already very established. This means it would serve new and established markets.

Different communication lines per market need to be defined.

For the freelancer market also the discrepancy between serving the local German speaking market versus involving offshore contributors from emerging countries is a challenge, especially how to address potential users and how to generate awareness about the solution among them. Probably researching and starting viral marketing activities in SNS like hi5.com or orkut.com might make sense.

Regarding the crowd sourcing aspect of the solution direct lead generation with German companies to win them as sponsors might be a way.

Porters five forces point of view

- Supplier bargaining power: The supplier provides the platform and can set certain rules but overall has a low bargaining power and heavily depends on the community using the platform (also see Threadless)
- Buyer bargaining power: The buyer is either the sponsor (e.g. an enterprise) or the contributor. Because of the low switching costs the bargaining power of a sponsor

is quite high because they can easily switch to a different crowd sourcing or freelancer solution. It is lower for contributors because they might depend on certain income stream but in a midterm time horizon also their switching cost are low.

- Barriers to entry: The barriers to entry are low for going online with such a solution and switching costs for users are low. But they are very high in terms of getting financing in the form of venture capital, gaining market share and attracting users, building a sustainable revenue stream.
- Threat of substitutes: Potential substitutes are all the solutions in the separate fields like eg. a pure freelancer solutions or a SNS.
- Rivalry among existing firms: Currently there are no direct competitors in this specific niche of the market. Apart from that rivalry amongst freelancer solutions is not that high. Rivalry amongst SNS is quite high. Crowd sourcing and open source solutions are not in rivalry yet. Basically gaining and keeping a market share is very difficult nowadays because of the number of available websites and the speed of new developments.

Risks

The risks in respect of the idea itself are mainly to be copied by someone else who roles out a me-too product with a better marketing or better partners.

This is a problem of all internet startups because there is no way of protecting the business idea. Patents are not applicable in this context. The only way to approach this is to develop a prototype in stealth mode and to quickly gain market share.

The appropriability is not so much of a problem since the business model would already be designed to generate revenue from the enterprise sponsors and from ad services which in combination would make the solution independent of other revenue streams and flexible to try out further revenue generating services.

This means the freelancer commissions that are usually charged are optional and are not part of the business model.

Other risks exist in the different culture of the European versus the US market which means that the crowd sourcing concept might not be perceived as positively as planned by potential users.

Optionally the whole solution could be offered as free service purely relying on ad service revenue or it could even follow a donation based open source approach. However a commercial solution is preferred but that might be perceived as not that much commons based and idealistic as the topic would suggest.

The main risk remains the initial funding of the venture and being copied.

Result, summary, conclusion

The conclusion of this thesis is that the combination of crowd sourcing solutions, social networks, freelancer marketplaces and the open source spirit is very attractive as a business opportunity. The developments in this area are still in the fluid phase and currently there is no solution in the market offering something similar to the initial idea of this thesis.

Also it is very likely that starting a business in that area would involve feasible upfront investments in the initial development of the web solution, but also continuous investments for further improvements. It is very likely that such a venture would start in a certain niche, e.g. crowd sourcing, and from there it would develop further into other niches.

From a theoretical point of view the findings in part two of the thesis suggest that these divergent solutions have more in common than it seems at the first glance. In part two various points of view are analyzed and in nearly for all of them at least pair-wise similarities are found between business SNS, freelancer type 1 / 2, crowd sourcing type 1 / 2 and open source solutions. Only the typical SNS functionalities seem to be limited to SNS solutions in this comparison.

Regarding the research related part of the thesis the ‘social inertia’ discussions in part one which result from applying graph theory from physics to the field of social networks do

provide a basis for further research. A new role of freelancer marketplaces in the light of the new economic situation might be interesting to further investigate. The classification of part two should provide a starting point for further research as well. The question remains if crowd sourcing starts to merge with SNS and freelancer marketplaces or if it remains in a niche as a separate topic.

Regarding the opportunity analysis related part of the thesis the conclusion is that it is worth a try and building a prototype is the next step.

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